

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently amended): An industrial robot comprising a first member and a second member which rotate relatively at a joint portion thereof;

the first member including:

a first mount portion where a first positioning member is embedded and

a first guide portion along which the first positioning member slides in such a manner as to produce; and

the second member including:

an abutment portion which is brought into abutment with the first positioning member when the first and second members are made to rotate relatively.

Claim 2 (withdrawn): An industrial robot comprising a first member and a second member which rotate relatively at a joint portion thereof;

the first member including:

a first mount portion where a first positioning member is embedded and

a first guide portion along which the first positioning member slides in such a manner as to protrude; and

the second member including:

a second mount portion where a second positioning member is embedded and

a second guide portion along which the second positioning member slides in such a manner as to protrude,

whereby the first and second positioning members are brought into abutment with each other when the first member and the second member are made to rotate relatively.

Claim 3 (Currently amended): An industrial robot as set forth in Claim 1 or 2, wherein the positioning member is held at a position where the positioning member does not protrude from the first member when performing a normal operation, whereas only when performing an origin adjustment, the positioning member is made to protrude.

Claim 4 (Currently amended): An industrial robot as set forth in Claim 3, wherein the first positioning member is brought into abutment as a mechanical origin position of the industrial robot.

Claim 5 (Currently amended): An industrial robot as set forth in Claim 3, further comprising calculation means for bringing the first positioning member into abutment as a position which is displaced from a mechanical origin position through a known angle determined in advance and calculating the mechanical origin position using the known angular displacement and the abutment position of the first positioning member.

Claim 6 (Currently amended): An industrial robot as set forth in Claim 3, wherein the abutment of the first positioning member is determined by monitoring a torque generated in the second member using a current to a driving motor for relatively rotating the second member.

Claim 7 (New): An industrial robot as set forth in Claim 1, wherein the abutment portion of the second member includes:

a second mount portion where a second positioning member is embedded; and

a second guide portion along which the second positioning member slides in such a manner as to protrude,

wherein the second positioning member is brought into abutment with the first positioning member when the first and second members are made to rotate relatively.